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**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107**

March 4, 1998

**Commander, Atlantic Division
Naval Facilities Engineering Command
Environmental Quality Division
Code: 1823
Norfolk, Virginia 23511-6287
Attn.: Dawn Boucher Hayes**

**SUBJECT: Site 10 Phase II Aquifer Testing Report
Allegany Ballistics Laboratory, Rocket Center, West Virginia**

Dear Dawn:

The EPA has reviewed the draft Phase II Aquifer Testing at Site 10 at the Allegany Ballistics Laboratory (ABL), Rocket Center, West Virginia. The document was prepared for the Navy by CH2M HILL.

GENERAL COMMENTS

- 1. The extent of total VOC contamination, based on the new data developed during the Phase II study should be indicated by drawing a zero concentration contour on a figure.**
- 2. It is unfortunate that soil and bedrock samples were not taken or described during drilling. Information concerning the sequence of soil or rock types might help in the evaluation of contamination.**
- 3. Leaving up to 60 feet of open borehole in some of the new bedrock wells might allow cross contamination of different bedrock zones. Some consideration of well construction in specific bedrock fractures zones should be reviewed, in addition to the planned monitoring and testing of these bedrock wells.**

DRAFT**SPECIFIC COMMENTS**

1. Page 2-1, Last Paragraph: There is a typo, the date for the IAS was 1983.
2. Page 2-4, Fourth Paragraph: In the last sentence, please add the word "draft" before Site 10 FFS and drop the "that soil contaminant concentrations were below preliminary remediation goals and" phrase.
3. Figure 2-4: There are no well identification numbers for the proposed extraction and monitoring well network, please either update this figure to include the well numbers or add a short sentence in the last paragraph of page 2-5 that states "The well identification numbers, for the wells finally installed at Site 10 are presented on Figure 3-1."
4. Page 4-2, First Paragraph: Please add a sentence about the orientation of the fractures, near vertical, high angle, or more flat or horizontal.
5. Page 4-2, Second Paragraph: At the end of the second sentence, please add "closer to the former TCE still" and drop the word "at" before the last Site 10.
6. Page 4-2, Second Paragraph: Can the low specific capacities identified for the bedrock wells during the Phase II testing be related to rock type? Were any samples of bedrock taken during drilling? As indicated elsewhere, the hinge line for the large Wills Mountain Anticlinal Axis is located in the eastern portion of Site 10. The bedrock in this area may have more silty shales than the bedrock to the west.
7. Page 4-6, Second Paragraph: Please add a sentence to indicate that an interpretive contours have been drawn on the figures 4-7 and 4-8 to indicate total VOC concentrations.
8. Figures 4-7 and 4-8: Please update figures to include outlines for VOC concentrations (see attached figures).
9. Figure 4-9: Please update this figure to represent the potential TCE contours in relation to the total VOC contours on the new figures 4-7 and 4-8 and that might reflect the piezometric surfaces shown on figure 4-3 and 4-4 (see attached figure).
10. Page 4-8, First Paragraph: Please drop the last sentence, and replace if we can, with a statement such as "However, no dissolved inorganic concentrations detected in these surrounding alluvial wells exceeded MCLs or action levels. The one bedrock well GGW6, which had an exceedence of the MCL for arsenic is under review"

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11. Page 4-12, Last Paragraph: Please drop the paragraph, or provide a more complete explanation of which areas referenced to the north or south.

If you have any questions concerning any of these comments, please call me (215) 566-3364.

Sincerely,



Bruce W. Beach
Remedial Project Manager

cc: Tom Bass, WV DEP
Wendy Noe, MDE
Greg Mott, CH2M Hill
Lou Williams, NAVSEA
Steve Hoffman, NAVSEA
David McBride, Alliant Techsystems, Inc.

